

11-09-2003

11

## CLAIMS

1. A knife assembly for a chipper, which is intended to be installed in the knife frame (11) forming part of the 5 chipper, and which knife assembly (12) includes

- a counter knife (16) fitted to the knife frame (11),
- an essentially symmetrical reversible knife (14) set against the counter knife (16), at the opposite sides of which there are two cutting bevel edges (20, 20'), one of which cutting 10 bevel edges (20) extends further than the counter knife (16) from the knife frame (11),
- a clamp (15), which is arranged to press on the reversible knife (14) from the opposite side than the counter knife (16),
- 15 - securing means (17) for securing the clamp (15) and tightening it onto the knife frame (11) and thus for pressing the reversible knife (14) between the clamp (15) and the counter knife (16), and
- at least one locking piece (18), which runs parallel to the 20 longitudinal axis of the reversible knife (14) and which extends on both sides of the boundary surface (21) between the reversible knife (14) and the counter knife (16), in order to prevent lateral movement of the reversible knife (14) relative to the counter knife (16), and which locking 25 piece (18) is arranged to form a fixed part of the reversible knife (14) or the counter knife (16),

in which knife assembly (12) the reversible knife (14), the counter knife (16), and the locking piece (18) are arranged in such a way that the position of the reversible knife (14) 30 relative to the knife frame (11) can be set as desired in the lateral direction of the reversible knife (14), characterized in that the counter knife (16) has two counter-surfaces (22, 23) arranged to rest on the knife frame (11), which are arranged to form an acute angle  $\alpha$ , the size of which is 25 - 35  $75^\circ$ , preferably  $35 - 70^\circ$ , for fitting the counter knife (16) to the knife frame (11) using shape-locking.

AMENDED SHEET

11-09-2003

2. A knife assembly according to Claim 1, characterized in that the clamp (15) has two counter-surfaces (24, 25) arranged to rest on the knife frame (11), which are arranged to form an acute angle  $\beta$ , the size of which is 40 - 85°, preferably 45 - 75°.

3. A knife assembly according to Claim 1 or 2, characterized in that the angle between the bisectors of angles  $\alpha$  and  $\beta$  is maximum 20°.

4. A knife assembly according to any of Claims 1 - 3, characterized in that the locking piece (18) is arranged in the counter knife (16), a groove (19) corresponding to it being arranged in the reversible knife (14) while the width of the locking piece (18) is the lateral direction of the reversible knife (14) is greater than the height of the locking piece (18).

5. A knife assembly according to any of Claims 1 - 4, characterized in that the counter knife (16) and the clamp (15) are arranged to be supported directly on the knife frame (11).

6. A counter-knife series for a knife assembly according to any of Claims 1 - 5, in which knife assembly both cutting bevel edges (20, 20') of the reversible knife (14) are arranged so that they can be sharpened, characterized in that for each sharpened reversible knife (14) the counter-knife series includes a corresponding counter knife (16), in order to adapt the position of the sharpened cutting bevel edge (20, 20'), relative to the knife frame (11), to be the same as it was prior to sharpening.

7. A counter-knife series according to Claim 6, characterized in that the counter-knife series includes 1 - 6, preferably 2 - 5 different counter knives (16) for changing the

AMENDED SHEET

11-09-2003

13

position of the reversible knife (14) by 0,5 - 1,5 mm, preferably 0,8 - 1,2 mm in the lateral direction of the reversible knife (14), after sharpening.

5 8. A counter-knife series according to Claim 5 or 6, characterized in that the counter-knife series includes at least one second counter-knife series including a corresponding number of counter knives (16), in which the angle  $\gamma$  of the counter bevel edge (26) of the counter knives (16) and/or the 10 distance of the cutting bevel edge (20) from the counter bevel edge (26) are different to those in the first counter-knife series.

9. A counter-knife series according to any of Claims 5 - 15 8, characterized in that the counter knives (16) are precipitation-hardened cast pieces or rolled pieces.